

Product datasheet

Anti-Smad3 antibody ab73942

★★★★☆ 1 Abreviews 1 References 2 图像

概述

产品名称	Anti-Smad3抗体
描述	兔多克隆抗体to Smad3
宿主	Rabbit
特异性	ab73942 detects endogenous levels of total Smad3 protein.
经测试应用	适用于: ICC/IF, WB, ELISA, IHC-P
种属反应性	与反应: Mouse, Human 预测可用于: Rat ▲
免疫原	Synthetic non-phosphopeptide derived from human Smad3 around the phosphorylation site of serine 204 (A-G-S ^P -P-N).
阳性对照	Human colon tissue. Extracts from HUVEC cells.

性能

形式	Liquid
存放说明	Shipped at 4°C. Store at -20°C. Stable for 12 months at -20°C.
存储溶液	Preservative: 0.02% Sodium Azide Constituents: 50% Glycerol, PBS (without Mg ²⁺ and Ca ²⁺), 150mM Sodium chloride, pH 7.4
纯度	Immunogen affinity purified
克隆	多克隆
同种型	IgG

应用

Our [Abpromise guarantee](#) covers the use of **ab73942** in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

应用	Ab评论	说明
ICC/IF	★★★★☆	Use at an assay dependent concentration.
WB		1/500 - 1/1000. Detects a band of approximately 48 kDa (predicted molecular weight: 48 kDa).

应用	Ab评论	说明
ELISA		1/5000.
IHC-P		1/50 - 1/100.

靶标

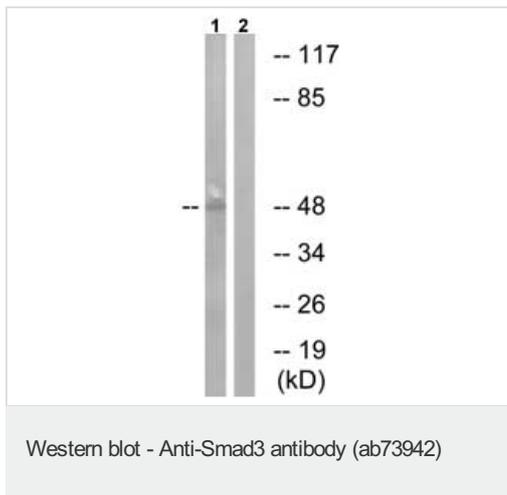
功能	<p>Receptor-regulated SMAD (R-SMAD) that is an intracellular signal transducer and transcriptional modulator activated by TGF-beta (transforming growth factor) and activin type 1 receptor kinases. Binds the TRE element in the promoter region of many genes that are regulated by TGF-beta and, on formation of the SMAD3/SMAD4 complex, activates transcription. Also can form a SMAD3/SMAD4/JUN/FOS complex at the AP-1/SMAD site to regulate TGF-beta-mediated transcription. Has an inhibitory effect on wound healing probably by modulating both growth and migration of primary keratinocytes and by altering the TGF-mediated chemotaxis of monocytes. This effect on wound healing appears to be hormone-sensitive. Regulator of chondrogenesis and osteogenesis and inhibits early healing of bone fractures. Positively regulates PDPK1 kinase activity by stimulating its dissociation from the 14-3-3 protein YWHAQ which acts as a negative regulator.</p>
疾病相关	<p>Colorectal cancer Loeys-Dietz syndrome 3</p>
序列相似性	<p>Belongs to the dwarfin/SMAD family. Contains 1 MH1 (MAD homology 1) domain. Contains 1 MH2 (MAD homology 2) domain.</p>
结构域	<p>The MH1 domain is required for DNA binding. Also binds zinc ions which are necessary for the DNA binding. The MH2 domain is required for both homomeric and heteromeric interactions and for transcriptional regulation. Sufficient for nuclear import. The linker region is required for the TGFbeta-mediated transcriptional activity and acts synergistically with the MH2 domain.</p>
翻译后修饰	<p>Phosphorylated on serine and threonine residues. Enhanced phosphorylation in the linker region on Thr-179, Ser-204 and Ser-208 on EGF and TGF-beta treatment. Ser-208 is the main site of MAPK-mediated phosphorylation. CDK-mediated phosphorylation occurs in a cell-cycle dependent manner and inhibits both the transcriptional activity and antiproliferative functions of SMAD3. This phosphorylation is inhibited by flavopiridol. Maximum phosphorylation at the G(1)/S junction. Also phosphorylated on serine residues in the C-terminal SXS motif by TGFBR1 and ACVR1. TGFBR1-mediated phosphorylation at these C-terminal sites is required for interaction with SMAD4, nuclear location and transactivational activity, and appears to be a prerequisite for the TGF-beta mediated phosphorylation in the linker region. Dephosphorylated in the C-terminal SXS motif by PPM1A. This dephosphorylation disrupts the interaction with SMAD4, promotes nuclear export and terminates TGF-beta-mediated signaling. Phosphorylation at Ser-418 by CSNK1G2/CK1 promotes ligand-dependent ubiquitination and subsequent proteasome degradation, thus inhibiting SMAD3-mediated TGF-beta responses. Phosphorylated by PDPK1. Acetylation in the nucleus by EP300 in the MH2 domain regulates positively its transcriptional activity and is enhanced by TGF-beta. Ubiquitinated. Monoubiquitinated, leading to prevent DNA-binding. Deubiquitination by USP15 alleviates inhibition and promotes activation of TGF-beta target genes. Poly-ADP-ribosylated by PARP1 and PARP2. ADP-ribosylation negatively regulates SMAD3</p>

transcriptional responses during the course of TGF-beta signaling.

细胞定位

Cytoplasm. Nucleus. Cytoplasmic and nuclear in the absence of TGF-beta. On TGF-beta stimulation, migrates to the nucleus when complexed with SMAD4 (PubMed:15799969). Through the action of the phosphatase PPM1A, released from the SMAD2/SMAD4 complex, and exported out of the nucleus by interaction with RANBP1 (PubMed:16751101, PubMed:19289081). Co-localizes with LEMD3 at the nucleus inner membrane (PubMed:15601644). MAPK-mediated phosphorylation appears to have no effect on nuclear import (PubMed:19218245). PDPK1 prevents its nuclear translocation in response to TGF-beta (PubMed:17327236).

图片



All lanes : Anti-Smad3 antibody (ab73942) at 1/500 dilution

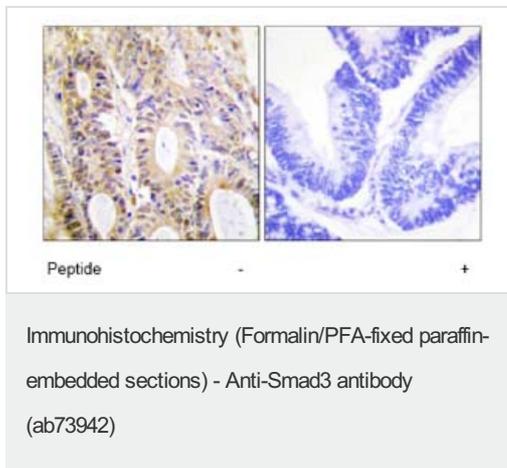
Lane 1 : Extracts from HUVEC cells

Lane 2 : Extracts from HUVEC cells with immunising peptide at 5 μ g

Lysates/proteins at 5 μ g per lane.

Predicted band size: 48 kDa

Observed band size: 48 kDa



Immunohistochemistry analysis of paraffin-embedded human colon tissue using ab73942, at 1/50 dilution, in the presence (right panel) or absence (left panel) of immunising peptide.

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